

## DECONSTRUCTION THINK TANK

FEBRUARY 9-11, 2020 SAN ANTONIO, TEXAS

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- Max Wechsler (San Francisco Bay Area)
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- Mike Gable (Pittsburgh)
- Shannon Goodman (Atlanta) virtual
- Shanon Miller (San Antonio)
- Shawn Wood (Portland)
- Stephanie Phillips (San Antonio)

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#### Schedule at a Glance

#### Sunday, February 9

6:00 - 6:30pm

6:30 - 8:30pm

8:30 - 10:00am

10:00 - 10:15am

10:15 - 11:45am

12:30 - 2:00pm

2:00 - 2:15pm

2:30 - 3:00pm

3:00 - 4:00pm

5:00 - 6:30pm

4:00pm

7:00pm

8:30am

9:00 - 10:30am

10:30 - 11:30am

11:30am - 2:00pm

11:45am - 12:30pm

By 6:00pm Meet at Southerleigh Fine Food & Brewery (136 E Grayson St #120)

5 minute drive from hotel or 25 minute walk along River Walk (1.3 mi)

Courtyard reception and introductions

Dinner (by invitation only)

Module 1: Climate Heritage and Building Capacity for Reuse

#### Monday, February 10

6:00 - 8:00am Continential breakfast at hotel (at your leisure)

8:00am Depart hotel via shuttle (destination: Hemisfair, Schultze House, 615 E Nueva St)

Module 2: Partnerships to Develop and Support Local Reuse Retail

Conclusions and break

Module 3: Reuse Retail as a Driver for Deconstruction Policy

Conclusions, break, and lunch

Module 4: Salvage Assessments and Ordinance Alternatives

Conclusions and break

Module 5: Removing Policy Barriers to Reuse (webinar format via Atlanta)

Final discussion and conclusions

Depart Hemisfair via shuttle (destination: AIA San Antonio, 1344 S Flores St)

Public Presesentation: Portland's Deconstruction Ordinance

**Dinner at The Fruteria** (walk to 1401 S Flores St; return to hotel via ride share)

#### Tuesday, February 11

6:00 - 8:30am Continential breakfast at hotel (at your leisure), checkout

Depart hotel via shuttle (destination: Eco Centro, 1802 N Main Ave)

Module 6: Increasing Demand and Supporting Reuse for All

Group discussion

Lunch, final conclusions, and next steps with Deconstruction Advisory Committee

Transportation to airport via shuttle

2:00pm

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## Module 1: Climate Heritage and Building Capacity for Reuse



Presenter: City of San Antonio Office of Historic Preservation

The zero waste movement aims to design municipal solid waste systems to mitigate carbon emissions, following a hierarchy of preventing waste; reducing and reusing materials; followed by recycling and energy recovery. With regards to buildings, the preservation of structures mirrors the pinnacle of waste prevention, and reusing building materials by deconstructing older structures instead of demolishing and landfilling helps achieve carbon mitigation and circular economy goals. As a kick off to the Think Tank, this module will pinpoint areas of overlap between the historic preservation and deconstruction and salvage movements and explore these intersections further, which are rooted in the growing international climate heritage movement that aims to bring cultural heritage practitioners to the forefront of climate action. The module will use the City of San Antonio's ongoing deconstruction and policy initiative as a case study, which, in addition to waste reduction, aims to advance affordable housing; equity in material access; retention of culturally significant materials in the communities from which they originated; and the rebuilding of a local pool of traditional tradespeople.

At the end of the module, participants will be asked to identify opportunities for collaborative capacity building both in San Antonio and in their own cities in an effort to move towards a circular economy and a world without waste.

- How can partnerships with preservation professionals advance deconstruction and salvage efforts in communities?
- How can municipalities design policies or incentives for the reuse of salvaged building materials to repair and sustain other older structures?
- How can we bring together disparate disciplines locally preservation, sustainability, salvage, waste diversion - to advance circular economy policy?

## Module 2: Partnerships to Develop and Support Local Reuse Retail



Presenter: Max Wechsler, Urban Ore, San Francisco Bay Area (Berkeley)

The relationship between Urban Ore, a for-profit reuse retail and recycling facility, and the City of Berkeley has been symbiotic since the company's incorporation in 1980. The City has supported the development of Urban Ore through various means, which can be described as pioneering and even elegant. These include:

- Local legislation mandating salvaging at the local landfill (1976), establishing a Zero Waste goal that defined and prioritized that highest and best use hierarchy of resource recovery (2005), and re-affirming the importance of human labor over machinery for the recovery of secondary resources (2018);
- The incubation of the business on City property from 1983 1989, whereby Urban Ore paid monthly rent as 10% of gross revenue above \$11,000, until it grew to the point where it could move and pay rent on a bigger property;
- The creation of a service contract for Urban Ore to salvage at the Berkeley transfer station (1999), including a service fee to be paid to the business for every ton salvaged;
- The invention of a Material Recovery Enterprise as a preferred use in the local zoning code, which distinguished Urban Ore from standard retail and allowed it to move onto its current site (2000); and
- Two long-term low-interest loans, totaling \$200,000, that supported the business while moving sites between 2000 2003.

In turn, Urban Ore helps the City reach local and state landfill diversion targets, saves the City on tipping fees and hauling costs on the 800+ tons it salvages annually, identifies hazardous materials at the transfer station, pays local taxes, and provides a myriad of economic, environmental, and community benefits. This module will discuss Berkeley's case study incubation model and will focus on the ideation and exploration of other potential public-private or public-nonprofit models to achieve mutually-beneficial goals.

- Through what means has local government supported reuse retail facilities, and what can we invent moving forward? How might the local landscape shape these options?
- What advantages or disadvantages do for-profit reuse retail facilities have over nonprofits? How can municipalities address potential operational barriers?

## Module 3: Reuse Retail as a Driver for Deconstruction Policy



Presenter: Mike Gable, Construction Junction, Pittsburgh

Construction Junction is Western Pennsylvania's first nonprofit organization focused on collecting and selling used and surplus building materials. The idea for Construction Junction was developed by the oldest grassroots environmental organization in the state, the Pennsylvania Resources Council, together with the Green Building Alliance, and Conservation Consultants. Today, Construction Junction has grown to a 100,000+ square-foot warehouse and has forged partnerships with Carnegie Mellon University's Project RE\_ and the Trades Institute of Pittsburgh. Project RE\_'s novel and uncharted use of an architecture program embedded in a material reuse operation is the only one of its kind in the United States and provides students with the opportunity to learn construction trades, establish a job history, experience the potential of used materials, and learn how to add value to existing materials by utilizing them in prototypes and architectural projects. Construction Junction's commitment to and prioritization of local communities and strategic partnerships has brought visibility to the importance and potential of building material reuse.

This module will discuss how reuse retail organizations can identify, develop, and sustain partnerships in their communities in an effort to advance deconstruction and salvage as an alternative to demolition. This module will also discuss the opportunities and challenges associated with operating a large-scale nonprofit facility, and how reuse retail organizations can organize and garner support to facilitate policy development.

- How can community organizations, reuse retail, and other entities combine efforts to advance deconstruction, salvage, reuse, and upcycling in the absence of an ordinance?
- How can reuse retail organizations effectively engage and support city governments to advance reuse policy locally?
- How can reuse retail organizations garner community support to make policy changes happen (grassroots approach)?

### Module 4: Salvage Assessments and Ordinance Alternatives



Presenters: Katie Kennedy, City of Seattle

Dirk Wassink, Second Use, Seattle/Tacoma

In metro Seattle/King County, work is underway to develop a policy strategy to increase building deconstruction and salvage. Existing policy requirements for salvage assessments in Seattle and a few surrounding municipalities have helped expand salvage opportunities in the area, but there is much more room for growth in an urban area experiencing rapid development. A Deconstruction Advisory Group has been meeting for the past year, with leadership from Seattle, King County and EPA Region 10. Stakeholders from government, salvage and deconstruction industry, construction, architecture have discussed possible policy strategies for growing the amount of material recovered for reuse from remodels and demolitions.

Currently, the following strategy is envisioned:

- 1. Extend the Salvage Assessment requirement by improving reporting on actual salvage completed.
- 2. Extend the Salvage Assessment by requiring verification of salvage.
- 3. Begin work on market development in preparation for growth in deconstruction.
- 4. Establish a deconstruction requirement covering a select fraction of demolitions.

In addition, an important factor is the multi-jurisdictional nature of the effort. Seattle and King County are working together on policy, and coordinating among more than 30 cities and towns can pose a challenge. Second, heavy property development and the concurrent rapid rise in housing costs have made it harder for low income households to keep from being pushed from their homes. This module will focus Seattle's current steps as well as exploring the complex challenges of advancing reuse in dense, high-cost, land-burdened, and/or quickly growing cities with development pressures and multiple stakeholders. Participants will be asked to recommend ways to promote salvage and reuse under these circumstances.

- How can municipalities support local reuse retail industries and advance deconstruction and salvage without an ordinance?
- How can cities move closer to deconstruction and reuse as the norm in the face of development pressures, high cost of land, and other complex factors?

## Module 5: Removing Policy Barriers to Reuse



Presenters: Shannon Goodman, Lifecycle Building Center, Atlanta Michelle Wiseman, City of Atlanta (virtual webinar format)

In November 2019, the Lifecycle Building Center was awarded a \$50,000 Sustainable Materials Management grant from the Environmental Protection Agency (EPA) to fund a deconstruction pilot training program and the creation of a Reuse for Communities Toolkit. Build Reuse, a nationwide nonprofit, will use the toolkit to educate communities across the country and develop a network of deconstruction and reclamation with the goal of increasing the job market around reuse.

This module will highlight the City of Atlanta and Lifecycle Building Center's partnership in advancing deconstruction as a tool for workforce development. This module will also discuss how to effectively communicate to political and community stakeholders on how deconstruction can serve as a means to reduce environmental impacts, conserve resources, and reduce costs, which are goals of the EPA. Lastly, the discussion will continue the theme from Module 4 around how to build momentum, support, and demand for deconstruction and material reuse in the absence of a formal ordinance, using Atlanta's approach as the central case study: workforce development and community partnerships versus regulatory tools.

- How can cities and nonprofits or private entities partner to advance deconstruction and reuse locally?
- What are policy alternatives to ordinances, or steps to build up to an ordinance, that are potentially equally effective?

## Module 6: Increasing Demand and Supporting Reuse for All



Presenter: Shawn Wood, City of Portland

A successful deconstruction policy can be broken down into three basic components: supply, retail, and demand. As a result of Portland's deconstruction ordinance, the city has a steady supply of materials, as well as a solid retail infrastructure. However, there are opportunities to bolster the demand component, as well as structure the retail component to be more equitable for all.

Currently, the City of Portland's Bureau of Sustainability is in the process of developing a sustainable consumption project. One area of focus is the prevention of building material waste. The following are draft actions that have been identified internally by the Bureau:

#### C. Prevent the wasting of building materials.

- 1. Establish better system inventory and transfer for material reuse like Copenhagen, centralized exchange for salvaged materials like Houston, include surplus construction materials.
- 2. Explore incentives and requirements for use of a minimum amount of salvage material in new projects, specifically forward-facing exterior applications.
- 3. Support development of new products that are fabricated from salvaged materials and surplus building material (e.g., mass timber, trusses, cladding, consumer goods).
- 4. Explore increased tipping fees to account for carbon impacts of wasted building material.
- 5. Promote house maintenance and repair through education, outreach and incentives. Prioritize use of salvaged material.

The module will focus on discussing these draft actions and exploring additional ones collectively for our communities, framed through the goals of increasing demand, diversifying end-use opportunities for salvaged materials, and developing equitable reuse retail systems.

- How do we support retail in a way that benefits everyone (nonprofit and for-profit outlets, as well as contractors that are not interested in opening a retail facility)?
- How do we increase demand for salvaged materials in our communities?

## Final Discussions, Report Out, and Next Steps



Full group discussion with San Antonio's Deconstruction Advisory Committee

To conclude the Think Tank, module presenters will provide a short summary of their session to the Deconstruction Advisory Committee and lunch guests, along with the most significant observations, insights, or conclusions from their module. Think Tank participants will lead a collective group discussion on key overall takeaways, our biggest questions, and the next steps for San Antonio's policy development. This portion of the Think Tank will serve as a base for the structure and content of the final report.

- What are our biggest collective takeaways, lessons, or conclusions from the Think Tank modules and discussions?
- What are our top three shared goals, opportunities, and challenges?
- What are final recommendations for San Antonio's upcoming deconstruction and salvage technical study? What are some conclusions that can be applied to San Antonio's policy efforts?

# MATERIAL CIRCULARITY FOR SUSTAINABLE CITIES

#### **LESSONS FROM PORTLAND**







Learn how North America's first deconstruction and salvage ordinance has diverted over 2.4 million pounds from the landfill and jumpstarted a local circular economy around the reuse of building materials in Portland, OR.

#### FEATURING

SHAWN WOOD, CITY OF PORTLAND
DAVID GREENHILL, GOOD WOOD DECONSTRUCTION



**FREE!** RSVP at ohp.eventbrite.com





#### **Terms of Reference**

#### **Circular economy**

An alternative to a traditional linear economy (make, use, dispose) in which we keep resources in use for as long as possible, extract the maximum value from them whilst in use, then recover and regenerate products and materials at the end of each service life. A circular economy is based on the principles of designing out waste and pollution, keeping products and materials in use, and regenerating natural systems.

#### **Climate Heritage Network**

The Climate Heritage Network (CHN) is a voluntary, mutual support network of local and city, state/provincial and regional, indigenous peoples, and national arts, culture and heritage governmental and quasi-governmental boards, offices, ministries and site management agencies as well as NGOs, universities, businesses and other organizations. The premise of the CHN is that, despite the profound cultural dimensions of climate change, today the arts, culture and heritage fields have not adequately mobilized on climate change issues. The CHN aims to flip this paradigm and raise ambitions by networking those committed to aiding their communities in tackling climate change and achieving the ambitions of the Paris Agreement. Conceived at the Global Climate Action Summit in 2018, the CHN launched in October 2019 and already includes over 70 arts, culture, and heritage organizations around the world.

#### **Decon**

An abbreviated term for deconstruction.

#### **Embodied carbon / embodied energy**

The energy consumed by all of the processes associated with the production of a building, from the mining and processing of natural resources to manufacturing, transportation, and product delivery. Simply, embodied carbon is the carbon footprint of a material. Recent studies estimate that the manufacture of building materials, or embodied energy, makes up 11% of total greenhouse gas emissions. See: operational carbon / operational energy.

#### Life-cycle assessment

An analysis technique to assess environmental impacts associated with all the stages of a product's life, from raw material extraction through materials processing, manufacture, transportation and distribution, use, and end-of-life. This is a tool that can be used to evaluate the potential environmental impacts of a product, material, process, or activity. Study results help to promote the responsible design and redesign of products and processes, leading to reduced overall environmental impacts and the reduced use and release of more toxic materials.

#### **Terms of Reference**

#### **Highest and best use**

Recovering materials for "highest and best use" means to realize the highest value of the embodied energy and materials from discarded products and packaging, according to the following hierarchy:

- 1. Reuse.
  - a. Reuse of the product for its original purpose.
  - b. Reuse of the product for an alternate purpose.
  - c. Reuse of the product's parts.
  - d. Reuse of the product's materials.
- 2. Recycle.
  - a. Recycling of inorganic materials in closed-loop systems.
  - b. Recycling of inorganic materials in single-use applications.
  - c. Composting or mulching of organic materials to sustain soils and avoid use of chemical fertilizers.
  - d. Composting or mulching of organic materials to reduce erosion and litter, and to retain moisture.

Determination of highest and best use requires an ongoing re-evaluation of commodity value in the marketplace, cost of collection, processing and marketing, and other outside factors that may bear on the ultimate economic return. The determination of highest and best use includes consideration of the full range of costs including environmental and health aspects.

#### **Material Recovery Enterprise**

A business that diverts discarded materials from a number of waste streams including but not limited to the Transfer Station, drop-off, pick-up and curbside collection. Such facilities must clean, sort, repair and/or process these materials and offer them for reuse and/or recycling through wholesale and/or retail sales, including bulk sales. The retail component of these facilities is limited to the sale of items recovered from the waste stream. No new items may be offered for sale at these facilities. Material Recovery Enterprises do not include flea markets, automobile wrecking establishments, manufacturer's outlet stores (factory second stores), consignment shops, second-hand stores, antique stores or any store which offers only used furniture, clothing and/or household items.

#### Operational carbon / operational energy

The term used to describe the emissions of carbon dioxide during the operational or in-use phase of a building, or the energy consumed by a building to meet heating, cooling, ventilation, lighting, and appliance demands. Recent studies estimate that operational energy makes up 28% of total greenhouse gas emissions. See: embodied carbon / embodied energy.

#### **Terms of Reference**

#### SB871 (Oregon)

Senate Bill 871 is an Oregon state bill that allows local jurisdictions to regulate lead-based paint and asbestos. Prior to the bill, local jurisdictions didn't have the authority. Portland adopted code language in July 2018 that places additional restrictions and requirements on mechanical demolition and deconstruction. The biggest impact was on mechanical demolition since all exterior painted, non-structural material must be removed by hand prior to mechanical demolition. (Portland's deconstruction ordinance already required this for applicable properties.)

#### Secretary of the Interior's Standards

The Department of the Interior's standards regarding the maintenance, replacement, and repairing of historic materials, as well as the design of new additions and alterations to a property. The Standards offer four distinct approaches to the treatment of historic properties—preservation, rehabilitation, restoration, and reconstruction—with accompanying Guidelines for each. Together, they serve as a frame of reference in the decision-making process about the changes to a historic property. Federal agencies use the Standards and Guidelines in carrying out their historic preservation responsibilities. State and local officials use them in reviewing both Federal and non-federal rehabilitation proposals. In the absence of locally-specific guidelines or ordinances, historic district and planning commissions across the country use the Standards and Guidelines to guide their design review processes.

- **Preservation**: focuses on the maintenance and repair of existing historic materials and retention of a property's form as it has evolved over time.
- **Rehabilitation**: acknowledges the need to alter or add to a historic property to meet continuing or changing uses while retaining the property's historic character.
- **Restoration**: depicts a property at a particular period of time in its history, while removing evidence of other periods.
- **Reconstruction**: re-creates vanished or non-surviving portions of a property for interpretive purposes.

A key standard considered universally applicable by preservation organizations and agencies is that missing or damaged historic materials should be replaced in-kind, or like-for-like. Access to high-quality, compatible replacement materials, such as historic wood siding, windows, or architectural details, is increasingly challenging and limited when the standard is wholesale demolition and landfilling of older structures. Deconstruction and salvage has the potential to return these elements to the market stream.

#### Soft strip, skim, architectural salvage

Non-structural deconstruction focusing on higher value finish materials and fixtures.

#### **Audrey Zamora-Johnson**

Audrey Zamora-Johnson joined the City of San Antonio Solid Waste Management Department in March of 2018 as the Assistant to the Director. In her current role of Chief of Staff she is responsible for three key areas: (i) the Planning and Innovation division; (ii) the Marketing and Outreach division; and (iii) the Commercial Initiatives and Multifamily Recycling division. Through these divisions Ms. Zamora-Johnson oversees several important projects and programs, including the business recycling recognition program ReWorksSA, the city wide Cart Downsizing marketing campaign, and the department's largest Waste Characterization Study in its history. Ms. Zamora-Johnson joined the City of San Antonio in 2007 in the City Attorney's Office. She is a licensed attorney with over 14 years of experience focusing on the areas of real estate, land use, historic preservation and environmental issues.

#### Brian Halverson, San Antonio

Brian Halverson has been with the City of San Antonio for ten years and currently serves as the Environmental Services Manager for the Solid Waste Management Department. He oversees the Commercial Initiatives and Multi-Family Recycling Division which is responsible for developing and overseeing the Department's education, assistance, and compliance efforts for waste not collected by SWMD collection crews. Brian holds a Bachelor of Arts degree in International Relations with a focus in East Asian History and Politics from Brigham Young University. He also holds a Master of Public Administration with emphases in Financial Management and Local Government Management from Brigham Young University's Marriot School of Management.

#### Cory Edwards, San Antonio

Cory Edwards has been with the San Antonio Office of Historic Preservation (OHP) since 2012, and since 2017, has overseen the department's design review program. At OHP, he has overseen the development and adoption of Historic Design Guidelines, new zoning overlay districts, and improvements to the local development code and processes related to the treatment of historic properties. Cory holds a Bachelor of Science and Master of Architecture with a Historic Preservation Certificate from Texas Tech University.

#### David Greenhill, Portland

David Greenhill is the co-founder of Good Wood, a deconstruction and salvage company located in Portland, Oregon. Good Wood provides deconstruction services for residential buildings and offers an affordable option for salvaged old-growth lumber.

#### Dirk Wassink, Seattle

Dirk is president of Second Use Building Materials, a Seattle-based building salvage retail business. He has been with the company for more than 20 years, serving in various roles in operations, management and outreach. Together with the Northwest Building Salvage Network (NBSN), he has built relationships with local government agencies over the past 15 years to provide salvage services and develop policy supporting salvage, deconstruction and reuse. He currently serves as co-chair of the Solid Waste Advisory Committee for Seattle Public Utilities. At the national level, Dirk has been an active member of Build Reuse, serving on the board (2006–2012), co-hosting a conference (2013), and editing the newsletter (2006–2018). He was a co-author on the original Build Reuse/BMRA Deconstruction Training Curriculum. Dirk has a Ph.D. in mechanical engineering from the University of Michigan, Ann Arbor.

#### Doug Melnick, San Antonio

Douglas Melnick was named the City of San Antonio's first Chief Sustainability Officer in March 2014. He oversaw the development of the SA Tomorrow Sustainability Plan and lead the development of the SA Climate Ready Climate Action and Adaptation Plan, San Antonio's first plan designed to meet the objectives of the Paris Climate Agreement, adopted in October 2019. He has fifteen years of local government experience and previously served as Director of Planning & Sustainability for the City of Albany, NY, the capital of New York State. Mr. Melnick serves as a core member of the Urban Sustainability Director's Network (USDN), serves on the Board of the International Society of Sustainability Professionals (ISSP), the San Antonio 2030 District, and is Chairman of the Board for Build San Antonio Green. He is member of the American Institute of Certified Planners, a CNU-Accredited Professional, and an ISSP-Sustainability Associate.

#### Jenny Hay, San Antonio

Jenny Hay is the ScoutSA Program Manager at the City of San Antonio Office of Historic Preservation. ScoutSA empowers people to explore the past by discovering and celebrating stories of San Antonio's historic places through the City's comprehensive survey and designation initiative as well as a robust community engagement and digital humanities portfolio. Prior to leading ScoutSA, Jenny held the position of Preservation Outreach Manager for the San Antonio Conservation Society, handling communication and development for one of the oldest preservation nonprofits in the US. She has experience in disaster response through her work implementing housing grants after Hurricane Rita and as part of the Department of the Interior's Strategic Sciences Working Group after the Deepwater Horizon oil spill. Jenny volunteered for several years with Historic Green in New Orleans and currently serves as event co-chair of the Promenade and Gala fundraiser for the Power of Preservation Foundation in San Antonio. Her published research includes topics of community resilience and heritage values, and she was co-author on the National Register nominations for the San Antonio Downtown and River Walk Historic District & the Main and Military Plazas Historic District. Jenny holds a BA in Geography from the University of Texas at Austin, her MS in Geography from Texas State University-San Marcos, and her PhD in Geography and Anthropology from Louisiana State University.

#### Julia Murphy, San Antonio

Julia Murphy is the City of San Antonio's Deputy Chief Sustainability Officer and was part of the team that developed the City's first climate action and adaptation plan, focusing on energy efficiency, modern transportation and air quality. Julia has worked on and published articles about natural resource conservation initiatives in the Texas Hill Country, and developed the award-winning San Antonio Bikes program. Signature projects include land conservation over the Edwards Aquifer Recharge Zone, implementing the first bike sharing system in Texas along the San Antonio River to connect the assets in the San Antonio Missions National Historical Park, establishing the Hardberger Park Conservancy and coordinating preservation and adaptive reuse of historic Herff Farm on the banks of Cibolo Creek. Previously, Julia worked with the Army Air Force Exchange Service in Italy, Germany and Spain. Julia serves on the board of the Cibolo Conservancy, and is a member of the American Institute of Certified Planners, Urban Sustainability Directors Network and Urban Land Institute. She earned her Bachelor of Business Administration and Master of Science in Community and Regional Planning degrees from the University of Texas at Austin.

#### Katie Kennedy, Seattle

Since 2018, Katie Kennedy has served as Seattle Public Utilities' Waste Diversion Lead focused on construction and demolition waste. Katie manages the City's requirements around C&D recycling and diversion including material disposal bans, mixed waste processing facility sampling, waste diversion reports for building permits, and salvage assessments. Prior to working for the city, she worked as a consultant for 16 years focused on developing solid waste management plans, managing large-scale waste characterization studies, and conducting recycling market research. Katie's work on recycling market research included investigating and finding solutions for collection, processing, and markets for carpet and asphalt roofing shingles.

#### Max Wechsler, San Francisco Bay Area

Max grew up surrounded by a scrap metal junkyard outside of Philadelphia. After graduating from Cornell University in 2009, he moved to San Francisco and started work as a salvager at the Berkeley transfer station for Urban Ore, Inc., rescuing materials from going to the landfill. In 2016, Max earned an MBA and an M.S. in Environmental Management from the University of San Francisco. The same year, he interned at the San Francisco Department of Environment, on the Zero Waste team, and then returned to Urban Ore in a managerial position, where he is currently the Operations Manager.

#### Michelle Wiseman, Atlanta

Michelle Wiseman is the Director of Waste Diversion & Outreach for the City of Atlanta Mayor's Office of One Atlanta. Michelle's emphasis is educating and engaging communities regarding recycling and sustainability issues within the city. Her responsibilities include partnering with key stakeholders together with internal departments, city council-members, residents, universities, business groups, non-profits and others to support environmental outreach and development. Michelle is a high energy connector that enjoys collaborating to develop solutions to move sustainability projects forward. Michelle is an active member of the Georgia Recycling Coalition, serves with Atlanta Recycles, and is an advisor to EarthShare of Georgia as well as the National EarthShare Board of Directors.

#### Mike Gable, Pittsburgh

Mike Gable is the founding Executive Director of Construction Junction (CJ), a nonprofit retailer promoting conservation through the reuse of building materials. Under Mike's 20 years of leadership, CJ has grown into a \$2.3 million operation with over 30 staff including an award winning job training program for Goodwill clients with disabilities and an innovative partnership with the Urban Design Build Studio to expose architecture students to working with reused materials. Construction Junction launched Reuse Retail, an inventory tracking platform developed to fill a critical void in the reuse industry's ability to comprehensively manage donated building materials. Before leading Construction Junction, Mike managed an organic farm for the Greater Pittsburgh Community Food Bank. He has a BA in Environmental Studies from the University of California at Santa Barbara. He spreads the reuse message through participation on the Board of Directors of the Pennsylvania Resources Council, as a member of the Pittsburgh American Institute of Architects' Committee on the Environment, and as the current President of the Board of Directors of Build Reuse. Mike continues to seek out innovations in technology to improve daily operations of reuse stores as well as new partnerships with job training nonprofits, makers, and artists working with at risk youth to promote expanded opportunities to find new uses for old materials.

#### Shannon Goodman, Atlanta

Shannon Goodman is co-founder and Executive Director of Lifecycle Building Center (LBC), an Atlanta nonprofit that captures building materials from the waste stream and directs them back into the community through reuse. LBC was formally founded in 2011 by a group of passionate volunteers who wanted to help Atlanta tackle its overwhelming solid waste problem by building the infrastructure needed to redirect reusable materials away from landfills and back into the local community. Prior to joining LBC as Executive Director in 2012, Shannon Goodman spent 13 years working as an architect, most recently with Perkins+Will. After coordinating the donation of 62 tons of building materials from Perkins+Will's office renovation in 2009, Shannon helped formally establish LBC in 2010 and served as LBC Board Chair until 2012. Shannon's efforts to establish the organization beyond operations, including fundraising, marketing and broad community engagement, have led LBC through a period of remarkable growth and to a strong financial position.

#### Shanon Miller, San Antonio

Shanon Shea Miller, AICP, became the City of San Antonio's Historic Preservation Officer and Director of the Office of Historic Preservation (OHP) in November 2008. Under Shanon's leadership, OHP implements an award winning program that includes extensive education and outreach, technical training, a comprehensive designation initiative, design and development review, and the City's Vacant Building Program. Shanon worked with a volunteer committee in 2012 to form the Power of Preservation (PoP) Foundation. PoP hosts the annual PROM fundraising event which raises funds for hands on programs of OHP such as S.T.A.R. (Students Together Achieving Revitalization), window restoration workshops, Rehabarama, and a learning lab for trades education. Ms. Miller was previously the Historic Preservation Officer for the City of Franklin, Tennessee, where she was involved in the designation of many new historic districts, the purchase and planning for the largest battlefield reclamation in the US, the purchase and rehabilitation of a 200-acre, National Register horse farm to be opened as a City park, the design of a comprehensive heritage tourism way finding system, and the implementation of the Civil War Trails Program.

#### Shawn Wood, Portland

Shawn Wood is the Construction Waste Specialist with the City of Portland's Bureau of Planning and Sustainability. Shawn helped develop and currently manages the City's deconstruction ordinance – a first-of-its kind whole-house deconstruction requirement. This requirement has resulted in the creation of new deconstruction contractors, new salvage retail operations and over 250 deconstruction projects in three years. Shawn's education is in urban planning and design. He's a preservationist at heart and has a passion for restoration and woodworking.

#### Stephanie Phillips, San Antonio

Stephanie Phillips is a Senior Specialist with the City of San Antonio Office of Historic Preservation. She leads the Rehabber Club initiative, which provides hands-on preservation workshops in an effort to make repair skills more accessible and affordable to all. Additionally, she is spearheading the City's ongoing deconstruction & salvage policy initiative. Stephanie is committed to serving organizations at the local, state, and national level, including the fundraising event committee of the Power of Preservation Foundation (POP); the Reuse Council of the State of Texas Alliance for Recycling (STAR); the national board of Build Reuse; and the Executive Committee of Preservation Action. Her professional and extracurricular work aims to strengthen the cooperative relationship between preservation and sustainability professionals, particularly those focused on circular economy policy and embodied carbon in the built environment. She holds a BS in Interior Architecture from the University of Wisconsin-Madison and a MS in Historic Preservation from the University of Texas at Austin.



